

PATENT ABSTRACTS OF JAPAN

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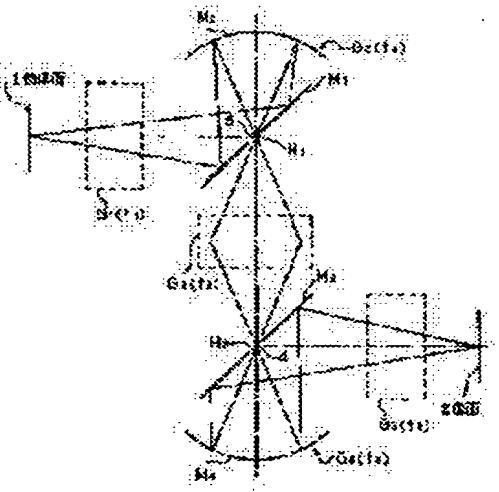
(51)Int.Cl. G02B 17/08

(21)Application number : 05-051718 (71)Applicant : NIKON CORP
 (22)Date of filing : 12.03.1993 (72)Inventor : TAKAHASHI TOMOWAKI

(54) REFLECTION/REFRACTION/PROJECTION OPTICAL SYSTEM

(57)Abstract:

PURPOSE: To provide a reflection/refraction/projection optical system with superior image-forming performance without using a beam splitter and capable of employing a batch exposure system.
CONSTITUTION: Light from a pattern on an object surface 1, after being reflected on the peripheral part of a first plane mirror M1 via a first convergence group G1, arrives at a second convergence group G2 consisting of a first concave reflecting mirror M2, and light reflected on the second convergence group G2 image-forms the intermediate image of the pattern in the aperture of the first plane mirror M1. Light from the first intermediate image image-forms the second intermediate image of the pattern in the aperture of a second plane mirror M3, and light from the second intermediate image arrives at a fourth convergence group G4 consisting of a second concave plane reflecting mirror M4, and light reflected on the fourth convergence group G4 is reflected in the periphery of the second plane mirror M3, and reflected light image-forms the third intermediate image of the pattern on the surface of an image surface 2 via a fifth convergence group G5.



LEGAL STATUS

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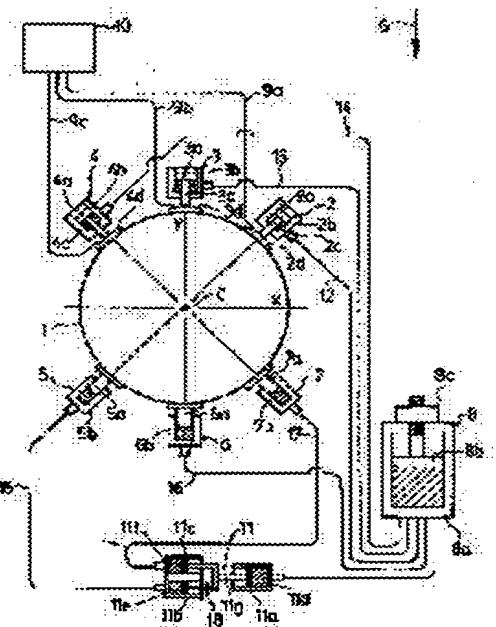
(21)Application number : 05-062562 (71)Applicant : NIKON CORP
(22)Date of filing : 26.02.1993 (72)Inventor : IKEDA MASATOSHI

(54) OPTICAL MEMBER HOLDING DEVICE

(57)Abstract:

PURPOSE: To eliminate need for adjusting holding power and to easily exchange a mirror.

CONSTITUTION: Since the acting characteristics of the pistons of hydraulic jacks 2-4 on the upper side of the vertical mirror 1 and the pistons of hydraulic jacks 5-7 on the lower side thereof are reverse, the pistons 2a-4a of the jacks 2-4 on the upper side are elevated when the pistons 5a-7a of the jacks 5-7 on the lower side are lowered. Besides, the diameters of the respective pistons 2a-7a are set to be a prescribed value according to a holding point and the holding power of the respective jacks 2-7 is equally distributed by the weight of the mirror 1. Then, the mirror 1 can be held under a state that distortion is suppressed to be the minimum.



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